

Access DB# 115267**SEARCH REQUEST FORM**

Scientific and Technical Information Center

Requester's Full Name: Jill Gray Examiner #: 66983 Date: 2/23/04
Art Unit: 1774 Phone Number: 301-524 Serial Number: 10/014796
Mail Box and Bldg/Room Location: Res 5C79 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Suture Material for Surgery, Process for its production and the Use ThereofInventors (please provide full names): Mueller, Erhard ; Plank, Heinrich ; Oberhoffner, SvenEarliest Priority Filing Date: 12/16/00

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Pls search attached Clms.

(Marked a few; looked like there were more.)

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	Type of Search	Vendors and cost where applicable
Searcher: <u>Est</u>	NA Sequence (#) _____	STN <u>\$ 187.06</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
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Date Searcher Picked Up: _____	Bibliographic <u>✓ (and)</u>	Dr. Link _____
Date Completed: <u>2-27-04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>5</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>75</u>	Other _____	Other (specify) _____



AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) Suture material for surgery comprising one or more filaments and formed with a coating, wherein the coating at least partly comprises a waxy bioresorbable polymer, which is essentially formed from a random terpolymer with a completely amorphous structure, the terpolymer is formed using glycolide, ε-caprolactone and trimethylene carbonate, and the terpolymer contains glycolide in a proportion of 5 to 50 wt. %, ε-caprolactone in a proportion of 5 to 95 wt. % and trimethylene carbonate in a proportion of 5 to 95 wt. %.
2. (Canceled)
3. (Canceled)
4. (Original) Suture material according to claim 1, wherein the terpolymer contains trimethylene carbonate and ε-caprolactone in a weight ratio between 95:5 and 5:95.

5. (Original) Suture material according to claim 1, wherein the terpolymer is produced by random copolymerization of glycolide, ϵ -caprolactone and trimethylene carbonate.
6. (Original) Suture material according to claim 1, wherein the terpolymer has an average molecular weight in the range of more than 30,000 Dalton.
7. (Original) Suture material according to claim 1, wherein the terpolymer has a glass transition point in the range -40 to +20°C.
- ✓ 8. (Original) Suture material according to claim 1, wherein the coating material has an inherent viscosity of 0.4 to 3.0 dl/g, particularly 0.7 to 1.3 dl/g, measured in HFIP at 25°C and a concentration of 0.5 wt.%.
- ✓ 9. (Original) Suture material according to claim 1, wherein the coating material contains at least one plasticizer in a proportion of 1 to 30 wt.%.

10. (Original) Suture material according to claim 1, wherein the

coating is formed from a combination of the bioresorbable polymer with fatty acid salts.

11. (Original) Suture material according to claim 1, wherein the coating represents 0.2 to 50 wt.% of the total weight of the coated suture material.
12. (Original) Coating material for surgical suture material for surgery essentially formed from a bioresorbable polymer, which is essentially formed from a random terpolymer with a completely amorphous structure.
13. (Original) Coating material according to claim 12, wherein the terpolymer can be applied in the fluid state without solvent in a melted state to the suture material.
14. (Original) Coating material according to claim 12, wherein it is formed from a combination of the bioresorbable polymer with fatty acid salts.
15. (Original) Coating material according to claim 13, wherein it is formed from a combination of the bioresorbable polymer with fatty acid salts.

16. (Original) Process for the production of a suture material for surgery comprising one or more filaments with a coating, wherein that coating takes place by the application of a bioresorbable polymer, which is essentially formed from a random terpolymer with a completely amorphous structure.
17. (Original) Process according to claim 16, wherein for coating the suture material a solution of the terpolymer is applied, where the terpolymer is dissolved in an organic solvent selected from the group of non-toxic organic solvents.
18. (Original) Process according to claim 17, wherein the terpolymer for a coating solution is dissolved in a concentration of 0.1 to 10, more particularly 0.5 to 5 wt.%.
19. (Original) Process according to claim 17, wherein for coating purposes, the suture material is drawn through a solution of the terpolymer.
20. (Original) Process according to claim 17, wherein for coating purposes the suture material is sprayed with a

solution of the terpolymer.

21. (Original) Process according to claim 17, wherein for coating purposes a solution of the terpolymer is applied to the suture material using a softening stick.
22. (Original) Process according to claim 17, wherein coating is performed at a temperature up to 40°C.
23. (Original) Process according to claim 17, wherein following the application of the coating, the suture material is dried with a heating device at 80 to 160°C.
24. (Original) Process according to claim 16, wherein coating with the terpolymer takes place in a melted state.
25. (Original) Process according to claim 16, wherein coating takes place with a bioresorbable polymer combined with fatty acid salts.

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FILE 'HCAPLUS' ENTERED AT 13:07:43 ON 27 FEB 2004

L1 77875 S MUELLER ?/AU OR MULLER ?/AU
L2 230 S PLANCK ?/AU
L3 5 S OBERHOFFNER ?/AU
L4 1 S L1 AND L2 AND L3

FILE 'REGISTRY' ENTERED AT 13:09:14 ON 27 FEB 2004

L5 1 S 502-44-3
L6 1 S 502-97-6
L7 1 S 2453-03-4
L8 1 S 205506-63-4

FILE 'HCAPLUS' ENTERED AT 13:20:09 ON 27 FEB 2004

L9 4 S L8
L10 30 S L7/D OR L7/DP
L11 36 S L6/D OR L6/DP
L12 747 S L5/D OR L5/DP
L13 13 S L10 AND L11 AND L12

FILE 'REGISTRY' ENTERED AT 13:21:56 ON 27 FEB 2004

L14 5360 S 502-44-3/CRN
L15 411 S 502-97-6/CRN
L16 246 S 2453-03-4/CRN
L17 15 S L14 AND L15 AND L16

FILE 'HCAPLUS' ENTERED AT 13:22:30 ON 27 FEB 2004

L18 13 S L17
L19 4712 S SUTUR?
L20 1021 S (SURGER? OR MICROSURGER? OR SURGICAL? OR MICROSURGICAL?
E MEDICAL GOODS/CV
L21 24313 S E3
L22 20 S (L9 OR L13 OR L18) AND (L19 OR L20 OR L21)
L23 5 S (L9 OR L13 OR L18) NOT L22

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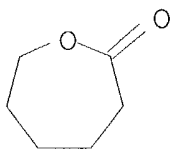
=> d 122 1-20 cbib abs hitstr hitind

L22 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
2004:119779 Document No. 140:152055 Process for making **sutures**
having improved knot tensile strength. Pokropinski, Henry; Scalzo,
Howard; Fischer, Jerome A. (Ethicon, Inc., USA). U.S. Pat. Appl.
Publ. US 2004028805 A1 20040212, 10 pp. (English). CODEN: USXXCO.
APPLICATION: US 2002-209202 20020731.

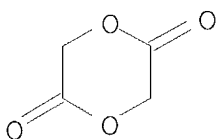
AB A process for improving the knot tensile strength of a braided
suture while maintaining its first throw holding
characteristics includes the steps of applying a biocompatible
copolymer to the braided **suture** and then heating the
suture to a temp. above the flow point of the copolymer. An
outer coat is applied to the **suture** after the heating
step. The **suture** may be scoured with a solvent before the
co-polymer is applied or the copolymer may be applied simultaneously
with the scouring step. The copolymer preferably comprises 1 or
more lactones, more preferably, ϵ -caprolactone and
glycolide. This process may be used with bioabsorbable
sutures, such as those comprising filaments made of
polyglycolide and polylactide. A series of tests were performed to
examine the knot tensile strengths of Vicryl braided **sutures**
coated with a mixt. of 90% ϵ -caprolactone and 10% glycolide
(90/10 CAP/GLY) in EtOAc. Coatings were applied by using
conventional lab. equipment. The application of 90/10 CAP/GLY to
the **suture** produced at least some increase in knot tensile
strength over that measured for the corresponding control
suture. Thus, a co-polymer coating may be applied to a
suture simultaneously with removing the spin finish.

IT 502-44-3D, ϵ -Caprolactone, polymers
502-97-6D, Glycolide, polymers 2453-03-4D,
Trimethylene carbonate, polymers
(prepn. of **sutures** having improved knot tensile
strength)

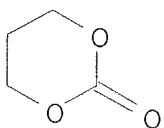
RN 502-44-3 HCAPLUS
CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



RN 502-97-6 HCAPLUS
CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A61L002-00
NCL 427002310
CC 63-7 (Pharmaceuticals)
ST **suture** knot tensile strength polyester fiber
IT Polyester fibers, biological studies
(caprolactone-glycolide; prepn. of **sutures** having improved knot tensile strength)
IT Polyester fibers, biological studies
(caprolactone; prepn. of **sutures** having improved knot tensile strength)
IT Polyester fibers, biological studies
Synthetic polymeric fibers, biological studies
(dioxanone; prepn. of **sutures** having improved knot tensile strength)
IT Polyester fibers, biological studies
(glycolide; prepn. of **sutures** having improved knot tensile strength)
IT Polyester fibers, biological studies
(lactide; prepn. of **sutures** having improved knot tensile strength)

- IT Polyethers, biological studies
(polyester-, fiber, dioxanone; prepn. of **sutures** having improved knot tensile strength)
- IT Coating materials
Solvents
Tensile strength
(prepn. of **sutures** having improved knot tensile strength)
- IT Paraffin oils
(prepn. of **sutures** having improved knot tensile strength)
- IT **Medical goods**
(**sutures**; prepn. of **sutures** having improved knot tensile strength)
- IT Polyester fibers, biological studies
(trimethylene carbonate; prepn. of **sutures** having improved knot tensile strength)
- IT 141-78-6, Ethyl acetate, processes 1592-23-0, Calcium stearate
31566-31-1, Glycerol monostearate
(prepn. of **sutures** having improved knot tensile strength)
- IT 95-96-5D, Lactide, polymers **502-44-3D**,
 ϵ -Caprolactone, polymers **502-97-6D**, Glycolide,
polymers **2453-03-4D**, Trimethylene carbonate, polymers
3041-16-5D, Dioxanone, polymers 26009-03-0, Polyglycolide
26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4,
Polyglycolide 26680-10-4, Polylactide 41706-81-4,
 ϵ -Caprolactone-glycolide copolymer
(prepn. of **sutures** having improved knot tensile strength)

L22 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:492741 Document No. 139:69689 Amorphous polymeric polyaxial initiators and compliant crystalline copolymers therefrom. Shalaby, Shalaby W.; Mathisen, Torbjorn (USA). U.S. Pat. Appl. Publ. US 2003120029 A1 20030626, 12 pp., Cont.-in-part of U.S. Ser. No. 3,640. (English). CODEN: USXXCO. APPLICATION: US 2002-285040 20021031. PRIORITY: US 2000-698527 20001027; US 2001-3640 20011102.

AB An absorbable cryst., monocentric polyaxial copolymer comprising a central carbon or nitrogen atom and at least three axes, each of which includes an amorphous flexible component adjacent and originating from the central atom and a rigid, crystallizable component extending outwardly from the amorphous, flexible component is disclosed along with the use of such copolymer in medical devices which may contain a bioactive agent. The present invention also relates to a **suture**, stents, stent mantles and sealing devices made from the polyaxial copolymer. Thus, triaxial polymeric initiator was prepd. by reacting glycolide 22.74, caprolactone

117.31, trimethylene carbonate 149.94 g with triethanolamine 1.34 g in the presence of stannous octoate toluene soln. Then, L-lactide 282.24 and caprolactone 27.98 g were added to the initiator to give a cryst. segmented copolymer with Tm 148-' and inherent viscosity in chloroform of 1.14 dL/g.

IT **473968-65-9P**, Caprolactone-glycolide-L-lactide-trimethylene carbonate block copolymer triethanolamine ester **548738-93-8P**, Caprolactone-glycolide-DL-lactide-trimethylene carbonate block copolymer triethanolamine ester
(prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

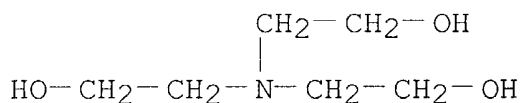
RN 473968-65-9 HCAPLUS

CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with 1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone, ester with 2,2',2''-nitrilotris[ethanol] (3:1), block (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 473968-64-8

CMF (C6 H10 O2 . C6 H8 O4 . C4 H6 O3 . C4 H4 O4)x

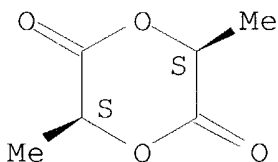
CCI PMS

CM 3

CRN 4511-42-6

CMF C6 H8 O4

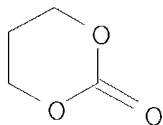
Absolute stereochemistry.



CM 4

CRN 2453-03-4

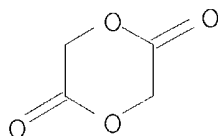
CMF C4 H6 O3



CM 5

CRN 502-97-6

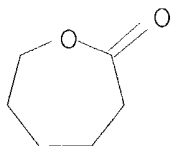
CMF C4 H4 O4



CM 6

CRN 502-44-3

CMF C6 H10 O2



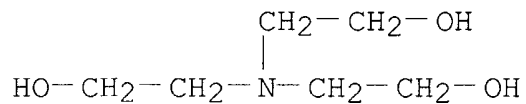
RN 548738-93-8 HCAPLUS

CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, polymer with
1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone, ester with
2,2',2''-nitrilotris[ethanol] (3:1), block (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 260054-59-9

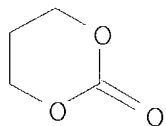
CMF (C6 H10 O2 . C6 H8 O4 . C4 H6 O3 . C4 H4 O4)x

CCI PMS

CM 3

CRN 2453-03-4

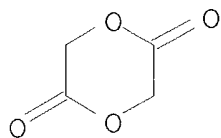
CMF C4 H6 O3



CM 4

CRN 502-97-6

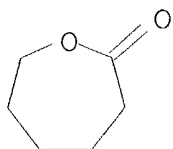
CMF C4 H4 O4



CM 5

CRN 502-44-3

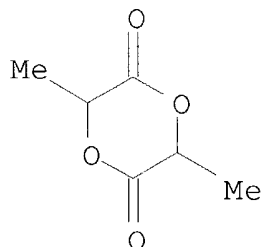
CMF C6 H10 O2



CM 6

CRN 95-96-5

CMF C6 H8 O4



IT **473968-60-4P**, Caprolactone-glycolide-trimethylene carbonate
copolymer triethanolamine ester
(triaxial polymeric initiator; prodn. of amorphous polymeric
polyaxial initiators for prepn. of compliant cryst. copolymers)

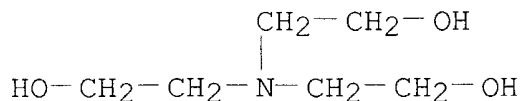
RN 473968-60-4 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, ester with 2,2',2''-nitrilotris[ethanol] (3:1) (9CI)
(CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3

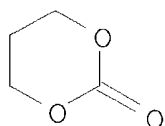


CM 2

CRN 205506-63-4
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x
CCI PMS

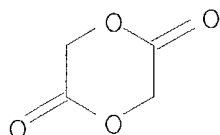
CM 3

CRN 2453-03-4
CMF C4 H6 O3



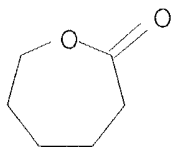
CM 4

CRN 502-97-6
CMF C4 H4 O4



CM 5

CRN 502-44-3
CMF C6 H10 O2



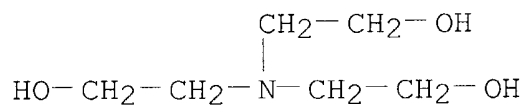
IT 548738-88-1P
(triaxial polymeric initiator; prodn. of amorphous polymeric
polyaxial initiators for prepn. of compliant cryst. copolymers in
medical devices)
RN 548738-88-1 HCAPLUS

CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, polymer with
1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone, ester with
2,2',2''-nitrilotris[ethanol] (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 339586-32-2

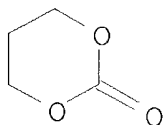
CMF (C6 H10 O2 . C6 H8 O4 . C4 H6 O3 . C4 H4 O4)x

CCI PMS

CM 3

CRN 2453-03-4

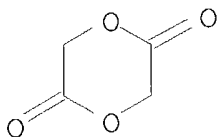
CMF C4 H6 O3



CM 4

CRN 502-97-6

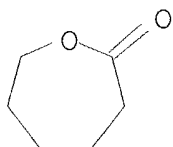
CMF C4 H4 O4



CM 5

CRN 502-44-3

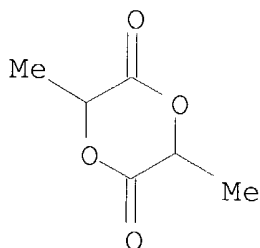
CMF C6 H10 O2



CM 6

CRN 95-96-5

CMF C6 H8 O4



IC ICM C08G069-08

NCL 528310000

CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 63

IT Absorbents

Medical goods

(prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

IT **Medical goods**

(stents; prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

IT **Medical goods**

(sutures; prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

IT **473968-65-9P**, Caprolactone-glycolide-L-lactide-trimethylene carbonate block copolymer triethanolamine ester 548738-83-6P, Caprolactone-L-lactide-trimethylene carbonate block copolymer

triethanolamine ester **548738-93-8P**, Caprolactone-glycolide-DL-lactide-trimethylene carbonate block copolymer triethanolamine ester

(prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

IT **473968-60-4P**, Caprolactone-glycolide-trimethylene carbonate copolymer triethanolamine ester

(triaxial polymeric initiator; prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers)

IT **473968-66-0P**, Caprolactone-trimethylene carbonate copolymer triethanolamine ester **548738-88-1P**

(triaxial polymeric initiator; prodn. of amorphous polymeric polyaxial initiators for prepn. of compliant cryst. copolymers in medical devices)

L22 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

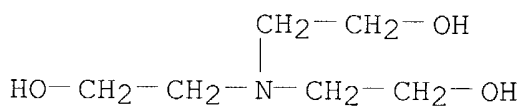
2002:833543 Document No. 137:338420 Amorphous polymeric polyaxial initiators and compliant crystalline copolymers made from them and their use in medical devices. Shalaby, Shalaby W.; Akerfeldt, Dan; Preinisz, Fredrik; Egnelov, Per; Mathisen, Torbjorn (USA). U.S. Pat. Appl. Publ. US 2002161168 A1 20021031, 15 pp., Cont.-in-part of U. S. Ser. No. 698,527. (English). CODEN: USXXCO. APPLICATION: US 2001-3640 20011102. PRIORITY: US 2000-698527 20001027.

AB An absorbable cryst., monocentric polyaxial copolymer comprising a central carbon or nitrogen atom and at least three axes, each of which includes an amorphous flexible component adjacent and originating from the central atom and a rigid, crystallizable component extending outwardly from the amorphous, flexible component is disclosed along with the use of such copolymer in medical devices which may contain a bioactive agent. The present invention also relates to a **suture**, stents, stent mantles and sealing devices made from the polyaxial copolymer. Thus, heating a mixt. of caprolactone 142.4, trimethylene carbonate 159.4, trimethylolpropane 1.666 g and 1.0 mL of a 0.203 M soln. of stannous octoate catalyst in toluene to 50° under vacuum until complete melting of the contents for 30 min, purging the system with Ar, stirring at 32 rpm, heating to 150° and maintaining at 150° for 4 h gave a polyaxial polymeric initiator (PPI). Cooling the reaction mixt. above to 110°, adding 398.5 g glycolide, mixing until complete melting the glycolide, heating to 180° with stirring, maintaining at this temp. for 2 h, cooling to 50° and maintaining the heat overnight gave a product which was isolated, ground, dried, extruded and redried to give an extrudate with inherent viscosity in hexafluoro-iso-Pr alc. of 0.97 dL/g.

IT **473968-65-9P**, Caprolactone-glycolide-L-lactide-trimethylene carbonate block copolymer ester with triethanolamine

(fibers for **suture**; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical

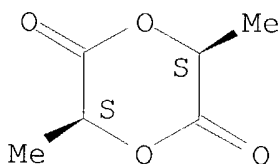
goods)
 RN 473968-65-9 HCAPLUS
 CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with
 1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone, ester with
 2,2',2''-nitrilotris[ethanol] (3:1), block (9CI) (CA INDEX NAME)
 CM 1
 CRN 102-71-6
 CMF C6 H15 N O3



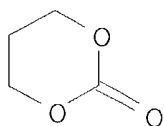
CM 2
 CRN 473968-64-8
 CMF (C6 H10 O2 . C6 H8 O4 . C4 H6 O3 . C4 H4 O4)x
 CCI PMS

CM 3
 CRN 4511-42-6
 CMF C6 H8 O4

Absolute stereochemistry.



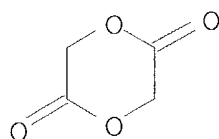
CM 4
 CRN 2453-03-4
 CMF C4 H6 O3



CM 5

CRN 502-97-6

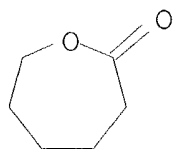
CMF C4 H4 O4



CM 6

CRN 502-44-3

CMF C6 H10 O2



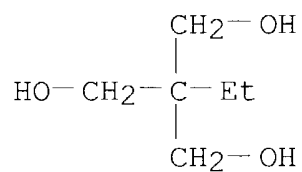
IT **473968-59-1P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with trimethylolpropane **473968-60-4P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with triethanolamine **473968-62-6P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with pentaerythritol (multi-axial polymeric initiator; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)

RN 473968-59-1 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1) (9CI) (CA INDEX NAME)

CM 1

CRN 77-99-6
CMF C6 H14 O3

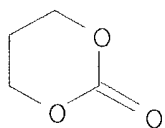


CM 2

CRN 205506-63-4
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x
CCI PMS

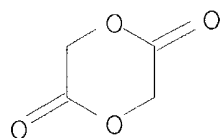
CM 3

CRN 2453-03-4
CMF C4 H6 O3



CM 4

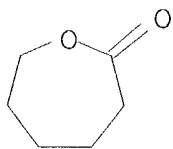
CRN 502-97-6
CMF C4 H4 O4



CM 5

CRN 502-44-3

CMF C6 H10 O2

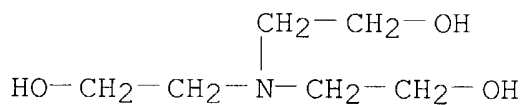


RN 473968-60-4 HCAPLUS
 CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
 2-oxepanone, ester with 2,2',2''-nitrilotris[ethanol] (3:1) (9CI)
 (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 205506-63-4

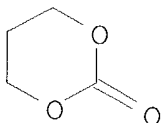
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x

CCI PMS

CM 3

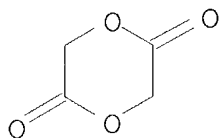
CRN 2453-03-4

CMF C4 H6 O3



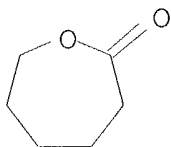
CM 4

CRN 502-97-6
CMF C4 H4 O4



CM 5

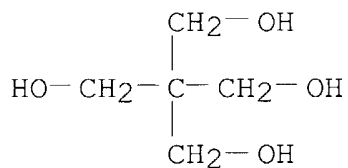
CRN 502-44-3
CMF C6 H10 O2



RN 473968-62-6 HCAPLUS
CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1)
(9CI) (CA INDEX NAME)

CM 1

CRN 115-77-5
CMF C5 H12 O4



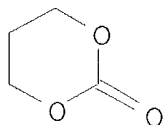
CM 2

CRN 205506-63-4
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x
CCI PMS

CM 3

CRN 2453-03-4

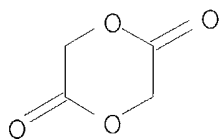
CMF C4 H6 O3



CM 4

CRN 502-97-6

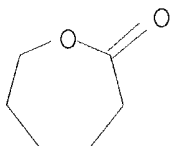
CMF C4 H4 O4



CM 5

CRN 502-44-3

CMF C6 H10 O2

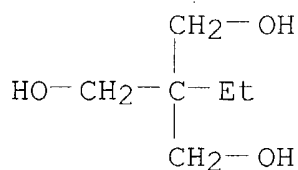


IT **473968-58-0P**, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with trimethylolpropane **473968-61-5P**, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with triethanolamine **473968-63-7P**, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with pentaerythritol
(multi-axial; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)

RN 473968-58-0 HCAPLUS
 CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
 2-oxepanone, ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol
 (3:1), block (9CI) (CA INDEX NAME)

CM 1

CRN 77-99-6
 CMF C6 H14 O3

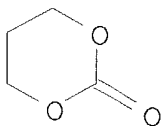


CM 2

CRN 116828-70-7
 CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x
 CCI PMS

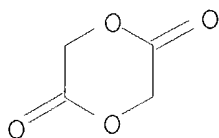
CM 3

CRN 2453-03-4
 CMF C4 H6 O3



CM 4

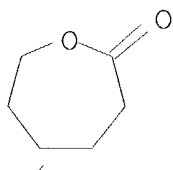
CRN 502-97-6
 CMF C4 H4 O4



CM 5

CRN 502-44-3

CMF C6 H10 O2



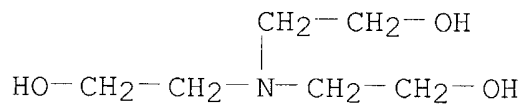
RN 473968-61-5 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, ester with 2,2',2''-nitrilotris[ethanol] (3:1), block
(9CI) (CA INDEX NAME)

CM 1

CRN 102-71-6

CMF C6 H15 N O3



CM 2

CRN 116828-70-7

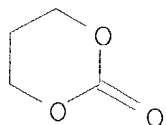
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x

CCI PMS

CM 3

CRN 2453-03-4

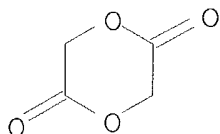
CMF C4 H6 O3



CM 4

CRN 502-97-6

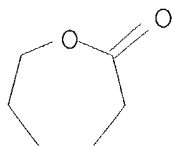
CMF C4 H4 O4



CM 5

CRN 502-44-3

CMF C6 H10 O2



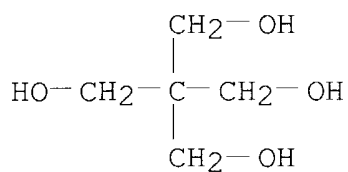
RN 473968-63-7 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, ester with 2,2-bis(hydroxymethyl)-1,3-propanediol
(4:1), block (9CI) (CA INDEX NAME)

CM 1

CRN 115-77-5

CMF C5 H12 O4



CM 2

CRN 116828-70-7

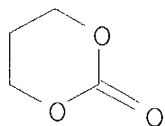
CMF (C6 H10 O2 . C4 H6 O3 . C4 H4 O4)x

CCI PMS

CM 3

CRN 2453-03-4

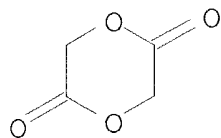
CMF C4 H6 O3



CM 4

CRN 502-97-6

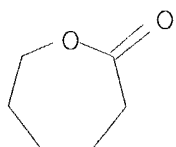
CMF C4 H4 O4



CM 5

CRN 502-44-3

CMF C6 H10 O2



- IC ICM C08G069-08
 NCL 528310000
 CC 35-7 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 63
- IT **Medical goods**
 Polymer chains
 (manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT Polyester fibers, biological studies
 (polycarbonate-, block, **suture**; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT Synthetic polymeric fibers, biological studies
 (polycarbonate-polyesters, block, **suture**; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT Polycarbonates, biological studies
 (polyester-, block, fiber, **suture**; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT **Medical goods**
 (stents; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT **473968-65-9P**, Caprolactone-glycolide-L-lactide-trimethylene carbonate block copolymer ester with triethanolamine
 (fibers for **suture**; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)
- IT 443745-82-2P, Caprolactone-trimethylene carbonate copolymer ester with trimethylolpropane **473968-59-1P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with trimethylolpropane **473968-60-4P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with triethanolamine **473968-62-6P**, Caprolactone-glycolide-trimethylene carbonate copolymer ester with pentaerythritol 473968-66-0P, Caprolactone-trimethylene carbonate copolymer ester with triethanolamine
 (multi-axial polymeric initiator; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)

IT 473968-58-0P, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with trimethylolpropane 473968-61-5P, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with triethanolamine 473968-63-7P, Caprolactone-glycolide-trimethylene carbonate block copolymer ester with pentaerythritol
(multi-axial; manuf. of amorphous polymeric polyaxial initiators for absorbable copolymers useful for medical goods)

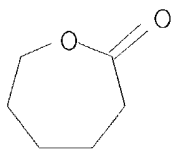
L22 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
2002:462457 Document No. 137:37699 Surgical **suture** material, method of its manufacture and its use. Mueller, Erhard; Oberhoffner, Sven; Planck, Heinrich (Deutsche Institute fuer Textil- und Faserforschung Stuttgart Stiftung des Oeffentlichen Rechts, Germany). Eur. Pat. Appl. EP 1214950 A1 20020619, 10 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR. (German). CODEN: EPXXDW. APPLICATION: EP 2001-129913 20011215. PRIORITY: DE 2000-10062881 20001216.

AB Surgical **sutures** are disclosed which are made of one or several coated filaments and are characterized by the fact that the coating is at least partly composed of a bioresorbable polymer, statistically a terpolymer having a completely amorphous structure.

IT 502-44-3D, ϵ -Caprolactone, copolymers
502-97-6D, Glycolide, copolymers 2453-03-4D,
Trimethylenecarbonate, copolymers 205506-63-4
(coated surgical **sutures**)

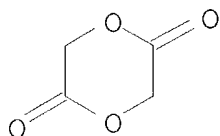
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)

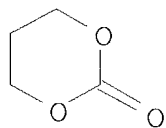


RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



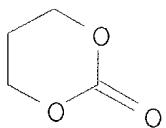
RN 2453-03-4 HCAPLUS
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



RN 205506-63-4 HCAPLUS
CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone
(9CI) (CA INDEX NAME)

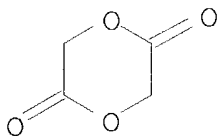
CM 1

CRN 2453-03-4
CMF C4 H6 O3



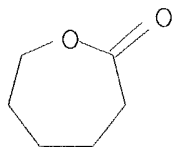
CM 2

CRN 502-97-6
CMF C4 H4 O4



CM 3

CRN 502-44-3
CMF C6 H10 O2



IC ICM A61L017-14
ICS A61L017-10
CC 63-7 (Pharmaceuticals)
ST surgical **suture** coating bioresorbable polymer
IT Polymers, biological studies
(bioresorbable; coated surgical **sutures**)
IT Polymers, biological studies
(co-, terpolymers; coated surgical **sutures**)
IT Coating materials
Drying
Glass transition temperature
Molecular weight
Plasticizers
Viscosity
(coated surgical **sutures**)
IT Solvents
(org.; coated surgical **sutures**)
IT Fatty acids, biological studies
(salts; coated surgical **sutures**)
IT **Medical goods**
(**sutures**; coated surgical **sutures**)
IT **502-44-3D**, ϵ -Caprolactone, copolymers
502-97-6D, Glycolide, copolymers 557-04-0, Magnesium
stearate 1592-23-0, Calcium stearate **2453-03-4D**,
Trimethylenecarbonate, copolymers **205506-63-4**
(coated surgical **sutures**)

L22 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
2001:417051 Document No. 135:20115 Amorphous polymeric polyaxial
initiators and compliant crystalline copolymers, their preparation
and molding. Shalaby, S. W.; Akerfeldt, Dan; Preiniz, Fredrik;
Egneloev, Per (Poly-Med, Inc., USA). PCT Int. Appl. WO 2001040348
A2 20010607, 27 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ,
EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM;
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA,
GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR.

(English). CODEN: PIXXD2. APPLICATION: WO 2000-SE2160 20001103.
PRIORITY: US 1999-PV167998 19991130; US 2000-698527 20001027.

AB An absorbable cryst., monocentric polyaxial copolymer comprises a central C or N atom and ≥ 3 axes, each of which includes an amorphous flexible component adjacent and originating from the central atom and a rigid, crystallizable component extending outwardly from the amorphous, flexible component for using such copolymer in medical devices which may contain a bioactive agent, such as a **suture**, stents and sealing devices made from the polyaxial copolymer. Thus, caprolactone-glycolide-trimethylene carbonate copolymer (25/45/30 M) had a melt temp. 196° and heat of fusion 32.1 J/g.

IT 205506-63-4P

(film or fiber; amorphous polymeric polyaxial initiators and compliant cryst. copolyesters for use in medical closure devices)

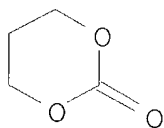
RN 205506-63-4 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

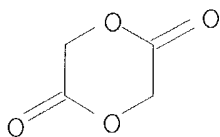
CMF C4 H6 O3



CM 2

CRN 502-97-6

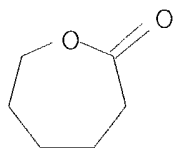
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



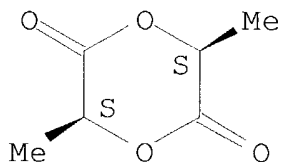
- IC ICM C08G063-00
 CC 35-5 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 40, 63
 IT **Medical goods**
 (stents; amorphous polymeric polyaxial initiators and compliant
 cryst. copolyesters for use in medical closure devices)
 IT **Medical goods**
 (**sutures**; amorphous polymeric polyaxial initiators and
 compliant cryst. copolyesters for use in medical closure devices)
 IT **205506-63-4P**
 (film or fiber; amorphous polymeric polyaxial initiators and
 compliant cryst. copolyesters for use in medical closure devices)
- L22 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
 2001:366730 Document No. 134:371835 Preparation of absorbable polymers
 for surgical articles. Roby, Mark S.; Kokish, Lydmilla K.; Mehta,
 Rooma M.; Jonn, Jerry Y. (United States Surgical Corp., USA). U.S.
 US 6235869 B1 20010522, 9 pp., Cont.-in-part of U.S. Ser. No.
 175,286, abandoned. (English). CODEN: USXXAM. APPLICATION: US
 1999-416367 19991009. PRIORITY: US 1998-175286 19981020.
- AB Synthetic absorbable medical devices made totally or in part from a
 random polymer comprising glycolide, lactide, trimethylene
 carbonate, and caprolactone are provided. The polymer can be
 fabricated into a monofilament which exhibits phys. characteristics
 equiv. to or superior to gut **sutures**. A polymer was
 obtained from glycolide, L-lactide, trimethylene carbonate and
 ϵ -caprolactone in the presence of stannous octoate. The
 phys. properties of **sutures** obtained from the polymer were
 detd.
- IT **339586-31-1P**, ϵ -Caprolactone-glycolide-L-lactide-
 trimethylene carbonate copolymer **339586-32-2P**,
 ϵ -Caprolactone-glycolide-lactide-trimethylene carbonate
 copolymer
 (prepn. of absorbable polymers for surgical articles)
- RN 339586-31-1 HCAPLUS
 CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, (3S,6S)-, polymer with
 1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone (9CI) (CA
 INDEX NAME)

CM 1

CRN 4511-42-6

CMF C6 H8 O4

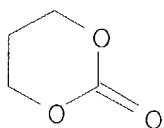
Absolute stereochemistry.



CM 2

CRN 2453-03-4

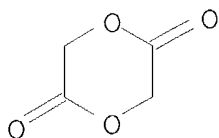
CMF C4 H6 O3



CM 3

CRN 502-97-6

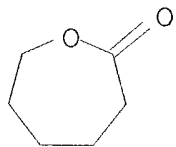
CMF C4 H4 O4



CM 4

CRN 502-44-3

CMF C6 H10 O2

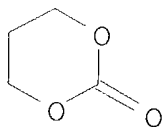


RN 339586-32-2 HCAPLUS
CN 1,4-Dioxane-2,5-dione, 3,6-dimethyl-, polymer with
1,4-dioxane-2,5-dione, 1,3-dioxan-2-one and 2-oxepanone (9CI) (CA
INDEX NAME)

CM 1

CRN 2453-03-4

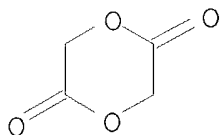
CMF C4 H6 O3



CM 2

CRN 502-97-6

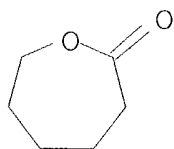
CMF C4 H4 O4



CM 3

CRN 502-44-3

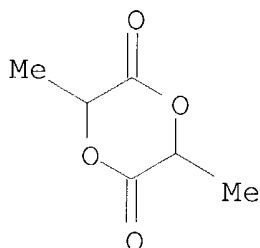
CMF C6 H10 O2



CM 4

CRN 95-96-5

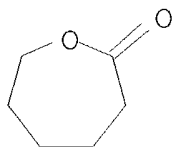
CMF C6 H8 O4



IC ICM C08G063-08
 ICS C08G064-00; A61B017-00; A61L017-00
 NCL 528354000
 CC 63-7 (Pharmaceuticals)
 Section cross-reference(s): 37
 ST absorbable polymer surgical **suture** prepn; medical
suture absorbable polymer fiber prepn; polyester fiber
 absorbable **suture** prepn
 IT **Medical goods**
 (clips; prepn. of absorbable polymers for surgical articles)
 IT Elongation, mechanical
Medical goods
 Tensile strength
 Young's modulus
 (prepn. of absorbable polymers for surgical articles)
 IT **Medical goods**
 (screws; prepn. of absorbable polymers for surgical articles)
 IT **Medical goods**
 (staples; prepn. of absorbable polymers for surgical articles)
 IT **Medical goods**
 (sutures; prepn. of absorbable polymers for surgical
 articles)
 IT 339586-31-1P, ϵ -Caprolactone-glycolide-L-lactide-

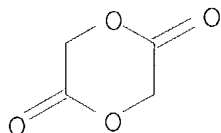
trimethylene carbonate copolymer **339586-32-2P**,
 ϵ -Caprolactone-glycolide-lactide-trimethylene carbonate
copolymer
(prepn. of absorbable polymers for surgical articles)

- L22 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1999:249028 Document No. 130:287099 Braided **suture** with
improved knot strength and process to produce same. D'Aversa,
Margaret; Scalzo, Howard L., Jr.; Jamiolkowski, Dennis D.; Bezwada,
Rao S.; Hunter, Alastair W.; Hill, Donald G. (Ethicon Inc., USA).
Eur. Pat. Appl. EP 908142 A2 19990414, 9 pp. DESIGNATED STATES: R:
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE,
SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP
1998-308259 19981009. PRIORITY: US 1997-61721 19971010; US
1998-159025 19980923.
- AB A process for producing a braided **suture** having an
improved knot strength comprise heating a braided **suture**
coated with a low mol. wt. biocompatible polymer to a temp.
sufficient to melt the low mol. wt. biocompatible polymer for a time
sufficient to allow the low mol. polymer to be redistributed into
the interstices of the braided **suture** thereby providing a
coated braided **suture** with an improved knot tensile
strength. Also disclosed is the coated braided **suture**
having a low mol. wt. polymer optimally dispersed throughout the
braided **suture**'s cross-section. Poly(L-lactide-glycolide)
was prepd. from a mixt. of 95 mol % L-lactide and 5 mol % of
glycolide monomer in presence of stannous octoate. The polymer was
extrude, braided, and coated with poly(ϵ -caprolactone-
glycolide). The straight and knot tensile strength and elongation
of the **suture** thus obtained was 29.12, 15.90 lb and 32%,
resp.
- IT **502-44-3D**, ϵ -Caprolactone, polymers
502-97-6D, Glycolide, polymers **2453-03-4D**,
Trimethylene carbonate, polymers
(braided **suture** with improved knot strength and process
to produce same)
- RN **502-44-3** HCAPLUS
- CN **2-Oxepanone** (8CI, 9CI) (CA INDEX NAME)



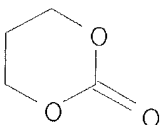
RN **502-97-6** HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A61B017-04
ICS A61L017-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35, 38
ST braided **suture** knot strength polylactide polyglycolide
IT Polyesters, biological studies
(aliph.; braided **suture** with improved knot strength and process to produce same)
IT Polymers, biological studies
(biocompatible; braided **suture** with improved knot strength and process to produce same)
IT Tensile strength
(braided **suture** with improved knot strength and process to produce same)
IT **Medical goods**
(**sutures**; braided **suture** with improved knot strength and process to produce same)
IT 30846-39-0P, Poly(glycolide-L-lactide)
(braided **suture** with improved knot strength and process to produce same)
IT 41706-81-4, Poly(ε-caprolactone-glycolide)
(braided **suture** with improved knot strength and process to produce same)
IT 95-96-5D, Lactide, polymers 144-62-7D, Oxalic acid, esters, polymers 502-44-3D, ε-Caprolactone, polymers 502-97-6D, Glycolide, polymers 542-28-9D, δ-Valerolactone, polymers 2453-03-4D, Trimethylene carbonate, polymers 3041-16-5D, 1,4-Dioxan-2-one, polymers 3207-00-9D, 1,4-Dioxepan-2-one, polymers 26009-03-0, Polyglycolide

26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4,
 Polyglycolide 26680-10-4, Polylactide 31852-84-3,
 Poly(trimethylene carbonate) 35438-57-4D, 1,4-Dioxepan-5-one,
 polymers 50862-75-4, Poly(oxycarbonyloxy-1,3-propanediyl)
 (braided **suture** with improved knot strength and process
 to produce same)

L22 ANSWER-8-OF-20 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:21716 Document No. 130:86209 Absorbable, biocompatible aliphatic
 polyesters of trimethylene carbonate, epsilon-caprolactone and
 glycolide and their medical use. Erneta, Modesto; Vhora, Idrish A.
 (Ethicon, Inc., USA). U.S. US:5854383 A 19981229, 9 pp.
 (English). CODEN: USXXAM. APPLICATION: US 1997-944792 19971006.

AB Absorbable, segmented copolymers comprising glycolide (I),
 trimethylene carbonate (II) and ϵ -caprolactone (III),
 exhibit a broad range of properties, esp. high strength, low
 modulus, and fast in vivo absorption, and have a variety of medical
 uses. The absorbable, segmented copolymers can be processed into
 filaments, films, foams and molded articles for surgical and medical
 applications such as burn dressings, fascial substitutes, liver
 hemostasis devices, bandages, arterial grafts or substitutes,
sutures, etc. Thus, a segmented copolymer made by
 three-stage polymn. of the compn., III:II:I 26:10:12, I 12, and I 40
 mol% with heat and stannous octoate catalyst, was extruded and drawn
 into size 4-0 **sutures** with orientation. The
sutures give 45.0% elongation, 84.7 kpsi modulus, 3.939 lbs
 straight tensile (0 day), 2.18 lbs (12 days), and 4.53 lbs (0 day)
 after annealing at 90° for 6 h at 5% relaxation.

IT 116828-70-7P, ϵ -Caprolactone-glycolide-trimethylene
 carbonate block copolymer
 (poly(glycolide)-segmented; absorbable, biocompatible aliph.
 polyesters of trimethylene carbonate, ϵ -caprolactone and
 glycolide and their medical use)

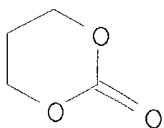
RN 116828-70-7 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
 2-oxepanone, block (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

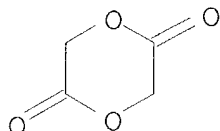
CMF C4 H6 O3



CM 2

CRN 502-97-6

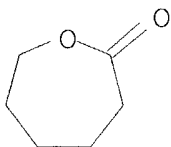
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM C08G063-08

NCL 528354000

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

ST absorbable biocompatible aliph polyester medical device; glycolide trimethylene carbonate caprolactone polyester prep; segmented polyester extruded oriented **suture** filament; molded segmented aliph polyester surgical article; block aliph polyester prep ring opening

IT Drug delivery systems

Medical goods

Needles (tools)

(absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

IT **Medical goods**

(bandages; absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

IT **Medical goods**

(dressings, adhesive; absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

IT **Medical goods**

(**sutures**; absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

IT **Medical goods**

(tissue adhesives; absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

IT **116828-70-7P, ϵ -Caprolactone-glycolide-trimethylene carbonate block copolymer**

(poly(glycolide)-segmented; absorbable, biocompatible aliph. polyesters of trimethylene carbonate, ϵ -caprolactone and glycolide and their medical use)

L22 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:580003 Document No. 129:221216 Bioresorbable waxlike composition, its use as bone wax, and method for its preparation. Oberhoffner, Sven; Planck, Heinrich (Deutsche Institute fuer Textil- und Faserforschung Stuttgart - Stiftung des Oeffentlichen Rechts, Germany). Ger. Offen. DE 19706621 A1 19980827, 6 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1997-19706621 19970220.

AB A waxy compn. for use in filling bone defects and as a hemostatic during bone surgery comprises a bioresorbable, completely amorphous statistical terpolymer of trimethylene carbonate, ϵ -caprolactone, and glycolide or glycolic acid. This compn., in the preferred mol. wt. range of 5000-50,000, has a glass transition temp. of -30 to 0°, an inherent viscosity of 0.1-0.9 dL/g, and shows good plasticity. The mol. wt. of the compn. can be regulated by addn. of ≥ 1 mono- or polyvalent alc. or of a mono- or divalent carboxylic acid or anhydride or ester thereof. It may addnl. be formulated with a plasticizer, a bone growth promoter, and/or an adhesive agent. Thus, 1,3-dioxan-2-one 350, caprolactone 350, glycolide 300, and a soln. of Sn octanoate 0.2 g in Et₂O were placed in a reactor, the Et₂O was removed under vacuum at 50°, and the mixt. was stirred under Ar at 1.5 bar and 205° for 5 h to produce a transparent, plastic polymer with an inherent viscosity of 0.798 dL/g and a glass transition temp. of -25.6° which was readily shaped.

IT **205506-63-4**

(amorphous; bioresorbable waxlike compn. for use as bone wax and its prepn.)

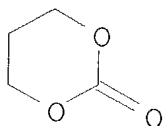
RN 205506-63-4 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

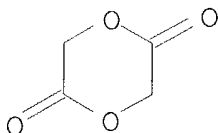
CMF C4 H6 O3



CM 2

CRN 502-97-6

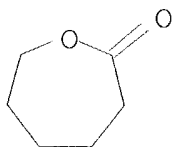
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM C08G063-64
ICS C08G063-08; C08G063-20; A61L025-00; C08L067-04; C08L069-00
CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

IT **Medical goods**

(bone wax; bioresorbable waxlike compn. for use as bone wax and its prepn.)

IT **205506-63-4**

(amorphous; bioresorbable waxlike compn. for use as bone wax and

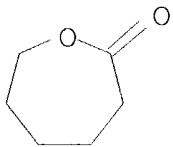
its prepn.)

L22 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1998:300817 Document No. 128:326595 Process and apparatus for coating surgical **sutures**. Labrecque, Samuel L.; Agarwal, Vishvaroop; Pokropinski, Henry (Ethicon, Inc., USA). Eur. Pat. Appl. EP 839542 A2 19980506, 11 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC; PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1997-308702 19971030. PRIORITY: US 1996-741842 19961031.

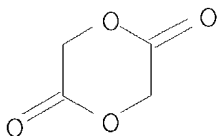
AB The present invention provides a process and app. for coating **sutures** by contacting a **suture** with an initial coating mixt., removing the wet coated **suture** for the initial coating mixt. and preventing a least part of the excess coating mixt. on the wet coated **suture** from contacting the initial coating mixt. thereby maintaining the initial coating mixt, at a substantially const. concn. and drying the wet coated **suture**.

IT 502-44-3D, ϵ -Caprolactone, polymers
502-97-6D, Glycolide, polymers 2453-03-4D,
Trimethylene carbonate, polymers
(process and app. for coating surgical **sutures**)

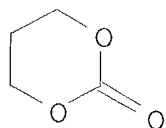
RN 502-44-3 HCAPLUS
CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



RN 502-97-6 HCAPLUS
CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



- IC ICM A61L017-00
 CC 63-8 (Pharmaceuticals)
 ST **suture** coating app
 IT Polyamides, biological studies
 (poly(amino acids); process and app. for coating surgical
 sutures)
 IT Coating process
 (process and app. for coating surgical **sutures**)
 IT Collagens, biological studies
 Gelatins, biological studies
 Glycerides, biological studies
 Polyesters, biological studies
 (process and app. for coating surgical **sutures**)
 IT Fatty acids, biological studies
 (salts; process and app. for coating surgical **sutures**)
 IT **Medical goods**
 (**sutures**; process and app. for coating surgical
 sutures)
 IT 95-96-5D, Lactide, polymers 108-05-4D, Vinyl acetate, polymers
 502-44-3D, ϵ -Caprolactone, polymers
 502-97-6D, Glycolide, polymers **2453-03-4D**,
 Trimethylene carbonate, polymers 3041-16-5D, p-Dioxanone, polymers
 9002-89-5, Polyvinyl alcohol 9003-05-8, Polyacrylamide
 (process and app. for coating surgical **sutures**)
- L22 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
 1998:231263 Document No. 128:271640 Biodegradable triblock terpolymer,
 its use for **surgical sewing threads**
 and the process for its production. Oberhoffner, Sven; Planck,
 Heinrich (Deutsche Institute fuer Textil- und Faserforschung
 Stuttgart - Stiftung des, Germany). Ger. Offen. DE 19641335 A1
 19980409, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE
 1996-19641335 19961008.
- AB Triblock terpolymers, useful for **surgical sewing**
threads, are manufd. from a biodegradable hard segment and a
 biodegradable, OH-terminated, amorphous, statistical terpolymer soft
 segment. A typical terpolymer was manufd. by heating a mixt. contg.
 glycolide 600, 35:35:35 caprolactone-1,3-dioxan-2-one-glycolide
 copolymer 400, and Sn octanoate 0.1 g in 40 min to 240° and
 at 240° for 70 min.
- IT **205506-63-4P**

(biodegradable triblock terpolymers for **surgical sewing threads**)

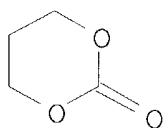
RN 205506-63-4 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone
(9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

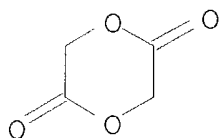
CMF C4 H6 O3



CM 2

CRN 502-97-6

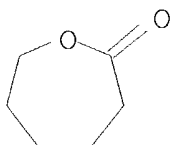
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM C08G085-00

ICS C08G063-64; C08G063-08; C08G063-91; C08G064-28; A61L017-00;
C08J003-28; D02G003-44

CC 40-2 (Textiles and Fibers)
Section cross-reference(s): 63

ST biodegradable triblock polymer manuf **surgical thread**; glycolide caprolactone dioxanone block polyester manuf

IT Biodegradable materials
(biodegradable triblock terpolymers for **surgical sewing threads**)

IT Polyester fibers, uses
(biodegradable triblock terpolymers for **surgical sewing threads**)

IT **Medical goods**
(**sutures**; biodegradable triblock terpolymers for **surgical sewing threads**)

IT **205506-63-4P**
(biodegradable triblock terpolymers for **surgical sewing threads**)

L22 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1998:231262 Document No. 128:271225 Biodegradable triblock terpolymer, its use for medical products and procedure for its production. Oberhoffner, Sven; Planck, Heinrich (Deutsche Institute fuer Textil- und Faserforschung Stuttgart - Stiftung des, Germany). Ger. Offen. DE 19641334 A1 19980409, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1996-19641334 19961008.

AB Triblock terpolymers, useful for medical products in the form of fibers, films, and injection moldings, are manufd. from a biodegradable hard segment and a biodegradable, OH-terminated, amorphous, statistical terpolymer soft segment. A typical terpolymer was manufd. by heating a mixt. contg. glycolide 600, 35:35:35 caprolactone-1,3-dioxan-2-one-glycolide copolymer 400, and Sn octanoate 0.1 g in 40 min to 240° and at 240° for 70 min.

IT **116828-70-7P**
(biodegradable triblock terpolymers contg. hard segments and statistical amorphous terpolymer soft segments for medical products)

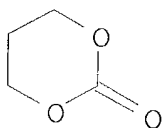
RN 116828-70-7 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and 2-oxepanone, block (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

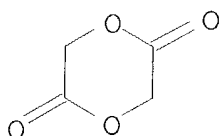
CMF C4 H6 O3



CM 2

CRN 502-97-6

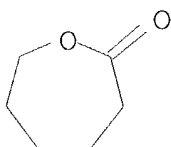
CMF C4 H4 O4



CM 3

CRN 502-44-3

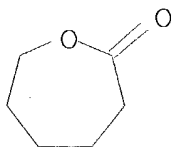
CMF C6 H10 O2



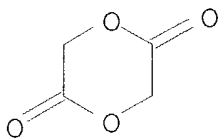
- IC ICM C08G085-00
 ICS C08G063-64; C08G063-08; C08G063-91; C08G064-28; A61L031-00;
 C08J005-18; C08J003-28; D03D015-00; D02G003-44; A61B017-064;
 A61B017-11
- CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 40, 63
- IT Biodegradable materials
Medical goods
 Plastic films
 (biodegradable triblock terpolymers contg. hard segments and
 statistical amorphous terpolymer soft segments for medical
 products)
- IT **116828-70-7P**
 (biodegradable triblock terpolymers contg. hard segments and

statistical amorphous terpolymer soft segments for medical products)

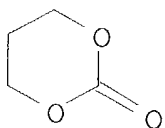
- L22 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1997:556447 Document No. 127:210419 A stiffened **suture** for use in a **suturing** device. Bregen, Michael F.; Measamer, John Paul (Ethicon Inc., USA). Eur. Pat. Appl. EP 788770 A1 19970813, 6 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1997-300831 19970210. PRIORITY: US 1996-598886 19960209.
- AB A **suture** for use in a laparoscopic **suturing** device comprising a **suture** having a first and second end. The first end being attached to a **surgical needle** and the second end being attached to a retainer wherein the adjacent to the retainer there is a stiffened segment of the **suture**
- IT 502-44-3D, ϵ -Caprolactone, polymers
502-97-6D, Glycolide, polymers 2453-03-4D,
Trimethylene carbonate, polymers
(stiffened **suture** for use in a **suturing** device)
- RN 502-44-3 HCAPLUS
CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



- RN 502-97-6 HCAPLUS
CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



- RN 2453-03-4 HCAPLUS
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A61B017-06
 ICS A61L017-00
 CC 63-8 (Pharmaceuticals)
 ST **suture** stiffened
 IT Abdomen
 Abdomen
 Surgery
 Surgery
 (laparoscopy; stiffened **suture** for use in a
suturing device)
 IT Fluoropolymers, biological studies
 (stiffened **suture** for use in a **suturing**
 device)
 IT Collagens, biological studies
 Gelatins, biological studies
 Polyamide fibers, biological studies
 Polyester fibers, biological studies
 Polypropene fibers, biological studies
 Polysulfones, biological studies
 Shellac
 Vinyon fibers
 Waxes
 (stiffened **suture** for use in a **suturing**
 device)
 IT **Medical goods**
 (**sutures**; stiffened **suture** for use in a
suturing device)
 IT Synthetic polymeric fibers, biological studies
 (tetrafluoroethylene; stiffened **suture** for use in a
suturing device)
 IT 50-21-5D, Lactic acid, polymers 79-14-1D, Glycolic acid, polymers
 95-96-5D, Lactide, polymers **502-44-3D**,
 ϵ -Caprolactone, polymers **502-97-6D**, Glycolide,
 polymers **2453-03-4D**, Trimethylene carbonate, polymers
 3041-16-5D, p-Dioxanone, polymers 3207-00-9D, 1,4-Dioxepan-2-one,
 polymers 7512-17-6D, D-Glucose, 2-(acetylamino)-2-deoxy-, polymers
 9002-84-0, Ptfе 9002-86-2, Pvc 9003-07-0, Polypropylene
 9004-34-6D, Cellulose, carboxyalkyl derivs., biological studies
 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid
 (stiffened **suture** for use in a **suturing**
 device)

L22 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

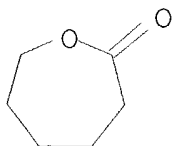
1997:479288 Document No. 127:99861 Hydrophobic resorbable polyesters for medical use. Rafler, Gerald; Jobmann, Monika; Mueller, Bernd (Fraunhofer-Gesellschaft Zur Foerderung Der Angewandten Forschung E.V., Germany). Eur. Pat. Appl. EP 778304 A2 19970611, 8 pp. DESIGNATED STATES: R: CH, DE, FI, FR, GB, LI. (German). CODEN: EPXXDW. APPLICATION: EP 1996-117263 19961028. PRIORITY: DE 1995-19545327 19951205.

AB Polyesters such as polylactides, lactide/glycolide copolymers, and poly(trimethylene carbonate) are rendered hydrophobic by reaction of terminal OH and/or CO₂H groups with long-chain fatty acids and/or fatty alcs. or their derivs. The hydrophobic polyesters are useful as matrix or coating materials for parenteral controlled-release dosage forms, as materials for temporary implants, and as coatings for implants. Thus, L,L-dilactide was subjected to ring-opening polymn. in the presence of stearyl alc. and Sn(II) octanoate as initiator at 170°. The product, contg. 1.9% stearyl groups, had an interfacial tension of 26.1 mN/m in the system CH₂Cl₂/H₂O.

IT **502-44-3DP**, 2-Oxepanone, reaction products with fatty acids and fatty alcs. **502-97-6DP**, Diglycolide, reaction products with fatty acids and fatty alcs. **2453-03-4DP**, Trimethylene carbonate, reaction products with fatty acids and fatty alcs. (hydrophobic resorbable polyesters for medical use)

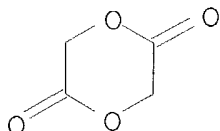
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



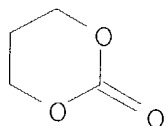
RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM C08G063-08
ICS C08G063-46; A61K009-16; A61L027-00
CC 63-7 (Pharmaceuticals)
IT Drug delivery systems

Medical goods

(hydrophobic resorbable polyesters for medical use)

IT 57-11-4DP, Octadecanoic acid, reaction products with polyesters, biological studies 95-96-5DP, Dilactide, reaction products with fatty acids and fatty alcs. 112-72-1DP, 1-Tetradecanol, reaction products with polyesters 112-80-1DP, Oleic acid, reaction products with polyesters 112-86-7DP, Erucic acid, reaction products with polyesters 112-92-5P, Stearyl alcohol 141-22-0DP, Ricinoleic acid, reaction products with polyesters 143-28-2DP, reaction products with polyesters **502-44-3DP**, 2-Oxepanone, reaction products with fatty acids and fatty alcs. **502-97-6DP**, Diglycolide, reaction products with fatty acids and fatty alcs. 506-46-7DP, Cerotic acid, reaction products with polyesters 506-50-3DP, Melissic acid, reaction products with polyesters 506-52-5DP, Ceryl alcohol, reaction products with polyesters **2453-03-4DP**, Trimethylene carbonate, reaction products with fatty acids and fatty alcs. 4511-42-6DP, L,L-Dilactide, reaction products with fatty acids and fatty alcs. 24980-41-4P, Poly-ε-caprolactone 25154-55-6DP, Nitrophenol, fatty esters, reaction products with polyesters 25248-42-4P, Poly[oxy(1-oxo-1,6-hexanediyl)] 26009-03-0P, Polyglycolide 26023-30-3P, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26161-42-2DP, reaction products with stearyl alc. 26202-08-4P, Polyglycolide 26680-10-4P, Polylactide 26780-50-7P, Glycolide/lactide copolymer 31852-84-3P, Poly(trimethylene carbonate) 33135-50-1DP, Poly(L-lactide), reaction products with stearyl alc. 36653-82-4DP, Cetyl alcohol, reaction products with polyesters 50862-75-4P, Poly(oxycarbonyloxy-1,3-propanediyl) (hydrophobic resorbable polyesters for medical use)

L22 ANSWER 15 OF 20 ,HCAPLUS COPYRIGHT 2004 ACS on STN
1996:521422 Document No. 125:169330 Liquid and low melt absorbable copolymers and their blends - synthesis and rheological characterization. Roller, Mark B.; Bezwada, Rao (ETHICON, Inc a Johnson & Johnson Company, Somerville, NJ, 08876-0151, USA). Annual Technical Conference - Society of Plastics Engineers, 54th(Vol. 3), 2848-2851 (English) 1996. CODEN: ACPED4. ISSN: 0272-5223.

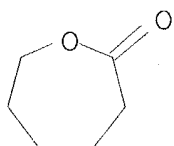
Publisher: Society of Plastics Engineers.

AB The development is described of absorbable liq. and low melt polymers derived from glycolide, lactide, ϵ -caprolactone, p-dioxanone, and trimethylene carbonate with inherent viscosity 0.1-0.3 dL/g. These new copolymers and their blends can be used for drug delivery, **suture** and needle coatings, lubricants and soft tissue augmentation. Some of the principles of copolymer design and the characterization methods used are described.

IT **502-44-3DP**, ϵ -Caprolactone, polymers
502-97-6DP, Glycolide, polymers **2453-03-4DP**,
Trimethylene carbonate, polymers
(prepn. and properties of absorbable liq. polymers and blends for medical uses)

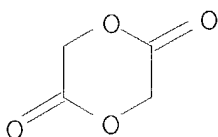
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



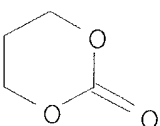
RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



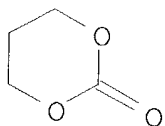
CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 63

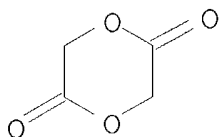
IT **Medical goods**

(prepn. and properties of absorbable liq. polymers and blends for

- medical uses)
- IT 95-96-5DP, Lactide, polymers **502-44-3DP**,
ε-Caprolactone, polymers **502-97-6DP**, Glycolide,
polymers **2453-03-4DP**, Trimethylene carbonate, polymers
3041-16-5DP, p-Dioxanone, polymers
(prepn. and properties of absorbable liq. polymers and blends for
medical uses)
- L22 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1995:771261 Document No. 123:237908 Absorbable block copolymers and
surgical articles fabricated from them. Bennett, Steven L.; Liu,
Cheng Kung (United States Surgical Corp., USA). U.S. US 5431679 A
19950711, 8 pp. (English). CODEN: USXXAM. APPLICATION: US
1994-209330 19940310.
- AB Block copolymers wherein one of the blocks is made from hard
phase-forming monomers and another of the blocks is made from soft
phase-forming monomers copolymerized with randomly intermingled units of
other soft phase-forming monomers, are useful in manufg. surgical
articles, including both monofilament and multifilament
sutures. ε-Caprolactone-1,3-dioxan-2-one copolymer
was prep'd. in a reactor and glycolide was added to the reactor to
form a block copolymer. The copolymer was extruded and stretched to
form a monofilament **suture** and its phys. properties were
studied.
- IT **116828-70-7P**
(absorbable block copolymers and surgical articles fabricated
from them)
- RN 116828-70-7 HCAPLUS
- CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, block (9CI) (CA INDEX NAME)
- CM 1
- CRN 2453-03-4
CMF C4 H6 O3



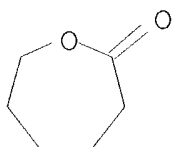
- CM 2
- CRN 502-97-6
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM A61L017-00

ICS C08G063-06; C08G063-64

NCL 606230000

CC 63-7 (Pharmaceuticals)

ST **suture** caprolactone dioxanone glycolide block copolymer;
polyester block absorbable **suture**IT **Medical goods**(absorbable block copolymers and surgical articles fabricated
from them)IT **Medical goods**(sutures, absorbable block copolymers and surgical
articles fabricated from them)IT **116828-70-7P**(absorbable block copolymers and surgical articles fabricated
from them)

L22 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:294636 Document No. 122:170272 Castor oil polymers for
fabricating and coating medical and surgical devices. Bezwada, Rao
S.; Hunter, Alastair W.; McGregor, Walter; Shchervinsky, Semyon
(Ethicon, Inc., USA). U.S. US 5371176 A 19941206, 7 pp.
Cont.-in-part of U.S. Ser. No. 13,858, abandoned. (English).
CODEN: USXXAM. APPLICATION: US 1993-142529 19931022. PRIORITY: US
1993-13858 19930205; US 1993-15706 19930209.

AB A polymer, particularly a biomedical polymer for the fabrication of
medical and surgical devices and for use as a coating, is described.

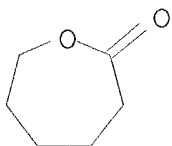
The polymer is derived from the reaction product of one or more lactone monomers and castor oil, preferably (a) ϵ -caprolactone, trimethylene carbonate, or an ether lactone; (b) castor oil; and (c) glycolide, lactide or 1,4-dioxanone. The preferred polymer is derived from ϵ -caprolactone, castor oil, and glycolide. The polymer in preferred embodiments is ideally suited for use as a coating for a surgical **suture**, particularly an absorbable, braided multifilament **suture** and **surgical needles**. For this application, glycerol is advantageously added to the reactive monomer mix from which the polymer is derived. Prepn. of the copolymers of the invention is described. Phys. and handling properties of **sutures** coated with copolymers of the invention are included. The results show that the castor oil copolymers improve the wet knot slide-down and reduce the tissue drag while maintaining comparable phys. properties relative to an uncoated control. Other results show significantly reduced penetration values for coated needles of the invention relative to the penetration value exhibited for an uncoated control.

IT 502-44-3D, ϵ -Caprolactone, copolymers with castor oil
502-97-6D, Glycolide, copolymers with castor oil
2453-03-4D, Trimethylene carbonate, copolymers with castor oil

(castor oil copolymers for fabricating and coating medical and surgical devices)

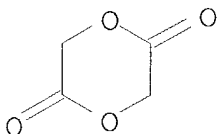
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



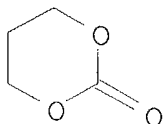
RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

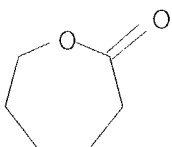
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



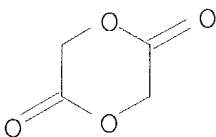
IC ICM C08G063-08
 NCL 528354000
 CC 63-7 (Pharmaceuticals)
 ST castor oil lactone copolymer surgical device; medical device castor oil lactone copolymer; caprolactone glycolide castor oil copolymer medical; **suture** castor oil lactone copolymer; **needle surgical** castor oil lactone copolymer
 IT Coating materials
 Medical goods
 (castor oil copolymers for fabricating and coating medical and surgical devices)
 IT Needles
 (**suture**, castor oil copolymers for fabricating and coating medical and surgical devices)
 IT **Medical goods**
 (**sutures**, castor oil copolymers for fabricating and coating medical and surgical devices)
 IT 56-81-5D, Glycerol, copolymers with castor oil and lactone
 95-96-5D, Lactide, copolymers with castor oil **502-44-3D**,
 ε-Caprolactone, copolymers with castor oil **502-97-6D**
 , Glycolide, copolymers with castor oil 542-28-9D,
 δ-Valerolactone, copolymers with castor oil **2453-03-4D**
 , Trimethylene carbonate, copolymers with castor oil 3041-16-5D,
 p-Dioxanone, copolymers with castor oil 3207-00-9D,
 1,4-Dioxepan-2-one, copolymers with castor oil 35438-57-4D,
 1,4-Dioxepan-5-one, copolymers with castor oil
 (castor oil copolymers for fabricating and coating medical and surgical devices)
 IT 26009-03-0, Polyglycolide 26202-08-4, Polyglycolide 26780-50-7,
 Poly(glycolide-co-lactide)
 (**suture**; castor oil copolymers for fabricating and coating medical and surgical devices)

L22 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
 1991:687274 Document No. 115:287274 Method for improving the storage stability of absorbable **sutures** and other medical polymeric articles susceptible to hydrolytic degradation. Hermes, Matthew E.; Muth, Ross R. (United States Surgical Corp., USA). U.S. US 5051272 A 19910924, 7 pp. (English). CODEN: USXXAM.
 APPLICATION: US 1988-221308 19880719.

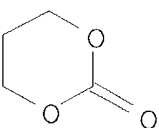
- AB The storage stability of polymeric articles (e.g. absorbable **sutures**, prostheses, gauze, etc.) susceptible to hydrolytic degrdn. is improved by application of a storage-stabilizing amt. of a mixt. comprising ≥ 1 water-sol. hygroscopic polyhydroxy compd. and/or ester thereof and ≥ 1 $\text{RCH(OH)(CH}_2\text{)}_n\text{CO}_2\text{R}_1$ ($\text{R} = \text{H, Me}$; $\text{R}_1 = \text{alkali metal or alk. earth metal}$; $n = 0, 1$) or a hydrate thereof to the article, the agent being retained by the article prior to sealing of the enclosure in which the article is packaged. Thus, samples of braided **sutures** filled with glycerin-calcium lactate showed equally improved stability to storage compared to glycerin-filled braid without Ca lactate. Addn. of Ca lactate to glycerol gave an increase in glycerol retention in braided **sutures**.
- IT **502-44-3D**, Caprolactone, copolymers **502-97-6D**, Glycolide, copolymers **2453-03-4D**, Trimethylene carbonate, copolymers
(medical article of, storage stabilization of, mixts. of polyhydroxy compds. and hydroxycarboxylates for)
- RN 502-44-3 HCAPLUS
- CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



- RN 502-97-6 HCAPLUS
- CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



- RN 2453-03-4 HCAPLUS
- CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A01N001-02
NCL 427002000
CC 63-8 (Pharmaceuticals)
ST calcium lactate glycerol **suture** stability; medical article
stability polyol hydroxycarboxylate
IT **Medical goods**
(clips, storage stabilization of, mixts. of polyhydroxy compds.
and hydroxycarboxylates for)
IT **Medical goods**
(gauzes, storage stabilization of, mixts. of polyhydroxy compds.
and hydroxycarboxylates for)
IT **Medical goods**
(sponges, storage stabilization of, mixts. of polyhydroxy compds.
and hydroxycarboxylates for)
IT **Medical goods**
(staples, storage stabilization of, mixts. of polyhydroxy compds.
and hydroxycarboxylates for)
IT **Medical goods**
(**sutures**, absorbable, storage stabilization of, mixts.
of polyhydroxy compds. and hydroxycarboxylates for)
IT 50-21-5D, Lactic acid, copolymers 79-14-1D, Glycolic acid,
copolymers 95-96-5D, Lactide, copolymers **502-44-3D**,
Caprolactone, copolymers **502-97-6D**, Glycolide, copolymers
2453-03-4D, Trimethylene carbonate, copolymers 3041-16-5D,
Dioxanone, copolymers
(medical article of, storage stabilization of, mixts. of
polyhydroxy compds. and hydroxycarboxylates for)

L22 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1989:237192 Document No. 110:237192 Caprolactone block copolymers as
coatings for surgical articles. Jarrett, Peter K.; Casey, Donald
J.; Lehmann, Leonard T. (American Cyanamid Co., USA). U.S. US
4788979 A 19881206, 7 pp. Cont.-in-part of U.S. Ser. No. 910,598,
abandoned. (English). CODEN: USXXAM. APPLICATION: US 1988-172608
19880324. PRIORITY: US 1986-910598 19860923.

AB A bioabsorbable coating for a surgical article comprises a copolymer
manufd. from the monomer caprolactone and ≥ 1 other
copolymerizable monomers. A mixt. contg. 80 g ϵ -
caprolactone, 1.585 mL lauryl alc. , and 39.5 μ L stannous octoate
was stirred at 180-200° over 8 min and 60 g glycolide and 60
g ϵ -caprolactone were added to give ϵ -caprolactone-
(ϵ -caprolactone-glycolide) AB block copolymer (I). Coatings
(2.57% of the coated **suture**) were applied to 1/0
polyglycolic acid braid from a 3.5% (wt./vol.) soln. of I dissolved
in Me₂CO. The coated **suture** was passed through 2 sides of
a wound in dogs and satisfactory knot repositioning ability and knot
security were obsd.

IT 116828-70-7P

(diblock, prepn. of, as coating material for surgical articles)

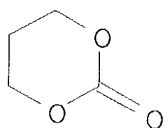
RN 116828-70-7 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, block (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

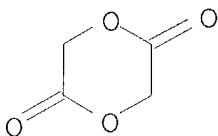
CMF C4 H6 O3



CM 2

CRN 502-97-6

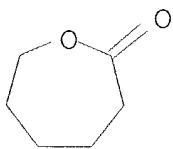
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM A61L017-00

NCL 128335500

CC 63-7 (Pharmaceuticals)

ST surgical **suture** bioabsorbable coating polyester;
caprolactone glycolide copolymer coating **suture**

IT **Medical goods**
(**sutures**, coating for, bioabsorbable, caprolactone
block copolymers as)

IT 111821-20-6P **116828-70-7P** 120901-64-6P
(diblock, prepn. of, as coating material for surgical articles)

IT 26009-03-0, Poly[oxy(1-oxo-1,2-ethanediyl)] 26124-68-5,
Polyglycolic acid 26202-08-4, Glycolide polymer 26680-10-4,
Lactide polymer 26780-50-7, Glycolide lactide copolymer
75734-93-9
(surgical **suture**, caprolactone block copolymers as
coatings for)

L22 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2004 ACS on STN
1988:556306 Document No. 109:156306 Bioabsorbable coating for
sutures and ligatures. Jarrett, Peter Kendrick; Casey,
Donald James; Lehmann, Leonard Theodore (American Cyanamid Co.,
USA). Eur. Pat. Appl. EP 261470 A1 19880330, 16 pp. DESIGNATED
STATES: R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE. (English).
CODEN: EPXXDW. APPLICATION: EP 1987-112860 19870903. PRIORITY: US
1986-910598 19860923.

AB The title coatings consist of polymers based on the monomer
caprolactone, contg. [O(CH₂)₅C(O)] (I). An ϵ -caprolactam-1-
lactide copolymer (II) was prepd. (details given); it had inherent
viscosity 0.50 dL/g (0.5 g/dL in CHCl₃). A coating of II was
applied to a 1/0 poly(glycolic acid) braid using a 2% acetone soln.
for 1.6% coating pickup by the **suture**. In in-vitro tests,
the coated **suture** showed knot repositioning (slippage
within the knot up the breaking point) 25.1 mm, knot security
(defined) 11.9 mm, and good wet and dry knot run-down, vs. 2.8 and
1.6 mm, with run-down not measured, for an uncoated **suture**
. In in-vivo tests, a **suture** with 1.8 wt.% coating pickup
showed satisfactory knot repositioning in 10 out of 18 tests, while
16 samples out of 18 showed good knot security, vs. 0/8 and 0.4 for
a control **suture**.

IT **116828-70-7**
(coatings, bioabsorbable, on **sutures**)

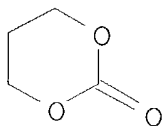
RN 116828-70-7 HCAPLUS

CN 1,4-Dioxane-2,5-dione, polymer with 1,3-dioxan-2-one and
2-oxepanone, block (9CI) (CA INDEX NAME)

CM 1

CRN 2453-03-4

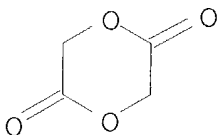
CMF C4 H6 O3



CM 2

CRN 502-97-6

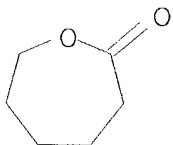
CMF C4 H4 O4



CM 3

CRN 502-44-3

CMF C6 H10 O2



IC ICM A61L017-00
 CC 63-7 (Pharmaceuticals)
 Section cross-reference(s): 38
 ST caprolactone copolymer bioabsorbable coating; **suture**
 bioabsorbable coating
 IT **Medical goods**
 (sutures, coatings for, bioabsorbable, from
 caprolactone copolymers)
 IT 24980-41-4, Poly(ϵ -caprolactone) 25248-42-4,
 Poly[oxy(1-oxo-1,6-hexanediyl)] 41706-81-4, ϵ -Caprolactone-
 glycolide copolymer 65408-67-5 111821-20-6 **116828-70-7**
 116828-94-5
 (coatings, bioabsorbable, on **sutures**)
 IT 67-64-1, Acetone, uses and miscellaneous
 (solvent, in application of bioabsorbable caprolactone-based

coatings to **sutures**)
IT 26009-03-0, Poly[oxy(1-oxo-1,2-ethanediyl)] 26124-68-5,
Poly(glycolic acid)
(**sutures**, bioabsorbable coatings for)

=> d 123 1-5 ti

L23 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Polymer-based medical implant having bioabsorbable textured surface

L23 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Scaffolds for tissue engineered hair

L23 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Star-shaped poly[(trimethylene carbonate)-co-(ϵ -caprolactone)] and its block copolymers with lactide/glycolide. Synthesis, characterization, and properties

L23 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Multiblock biodegradable hydrogels for use as controlled release agents for drugs delivery and tissue treatment agents

L23 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
TI Process for preparing particles of bioabsorbable polymer

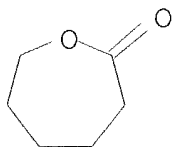
=> d 123 1,2,5 cbib abs hitstr hitind

L23 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
2003:133976 Document No. 138:175946 Polymer-based medical implant having bioabsorbable textured surface. McGhan, Jim J. (USA). U.S. Pat. Appl. Publ. US 2003036803 A1 20030220, 8 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-931692 20010814.

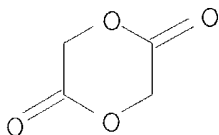
AB A hybrid medical implant having a biocompatible, nonabsorbable core portion and a bioabsorbable textured outer surface portion overlying the core portion. The hybrid implant is useful as a prosthesis for tissue augmentation and/or reconstruction. The core portion of the implant includes a body formed from a nonabsorbable, biocompatible implantable material such as silicone or urethane elastomer. The core portion may be either a solid body, a viscous gel body or a fluid-filled shell. The textured outer surface portion envelops the core portion and presents an irregular, bioabsorbable textured surface to the exterior environment. As a capsule forms around the implant following implantation, the irregular contour of the outer surface of the implant disorients structural proteins in the capsule to impede spherical contraction thereof. Either during the formation of the capsule and/or after the capsule is formed, the

outer bioabsorbable surface portion of the implant is absorbed by the body of the host. After bioabsorption of the bioabsorbable outer surface portion, the remaining core portion of the implant remains enveloped by the capsule but unattached to capsular tissue. The outer bioabsorbable portion of the hybrid implant may include more than one biocompatible, bioabsorbable material.

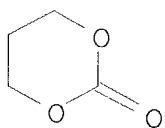
IT 502-44-3D, Caprolactone, polymers 502-97-6D,
Glycolide, polymers 2453-03-4D, Trimethylene carbonate,
polymers
(polymer-based medical implant having bioabsorbable textured
surface)
RN 502-44-3 HCAPLUS
CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



RN 502-97-6 HCAPLUS
CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS
CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A61F002-04
ICS A61F002-12
NCL 623023710; 623008000
CC 63-7 (Pharmaceuticals)
IT 95-96-5D, Lactide, polymers 502-44-3D, Caprolactone,
polymers 502-97-6D, Glycolide, polymers 1398-61-4,

Chitin **2453-03-4D**, Trimethylene carbonate, polymers
3041-16-5D, Dioxanone, polymers 9012-76-4, Chitosan 24980-41-4,
Polycaprolactone 25248-42-4, Polycaprolactone 25322-68-3,
Polyethylene oxide 26009-03-0, Polyglycolide 26023-30-3,
Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26202-08-4, Polyglycolide
26680-10-4, Polylactide 29223-92-5 31621-87-1, Polydioxanone
31852-84-3, Poly(trimethylene carbonate) 50862-75-4,
Poly(oxy carbonyloxy-1,3-propanediyl)
(polymer-based medical implant having bioabsorbable textured
surface)

L23 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:157619 Document No. 136:205499 Scaffolds for tissue engineered
hair. Barrows, Thomas H. (Bioamide, Inc., USA). PCT Int. Appl. WO
2002015952 A1 20020228, 20 pp. DESIGNATED STATES: W: AE, AG, AL,
AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ,
DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY,
DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT,
SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO
2001-US24671 20010807. PRIORITY: US 2000-PV223636 20000808.

AB Porous, bioabsorbable scaffolds for tissue engineering of human hair
follicles, methods for their manuf. and methods of their use in
creating new hair are disclosed. PEG was melt extruded into a
1.0-mm diam. filament and cut into 2-cm lengths. was melt extruded
into a 1.0 mm 10 diam. filament and cut into 2 cm lengths. One of
the PEO filaments was dipped into water, hydrating the surface and
making it sticky. This was then dipped into sodium chloride
crystals that had been ground into fine particles. Excess salt was
shaken off and the coating was allowed to dry. A 10% soln. of
Resomer RG 504 (PLGA) was dripped onto the salt encrusted PEG
filament and the excess soln. was allowed to run off. Addnl. powd.
salt was sprinkled onto the surface until it was completely covered.
After the acetone evapd., the coated PEG filament was placed in
water until all of the salt and PEG dissolved, leaving a hollow
filament of porous PLGA which was removed, flattened, and cut into
thin strips. The strips were rolled between finger and thumb and
cut into 2-mm lengths. A 0.3-mm diam. concentric hole was made in
the end of another PEG filament by pressing a heated needle about
2-mm into the PEG. This caused molten PEG to build up around the
sides of the filament. The hole was then filled with one of the
above rolled strips of porous PLGA. Upon evapn. of the acetone and
dissolving all of the salt and PEO in water and drying, the desired
porous bioabsorbable polymer scaffold was obtained.

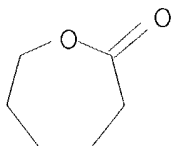
IT **502-44-3D**, Caprolactone, polymers **502-97-6D**,

Glycolide, polymers **2453-03-4D**, Trimethylene carbonate, polymers

(scaffolds for tissue engineered hair)

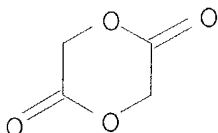
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



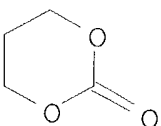
RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM A61L027-56

ICS A61L027-18; A61L027-26; A61L027-38; A61F002-10; C12N005-06

CC 63-7 (Pharmaceuticals)

IT 95-96-5D, Lactide, polymers **502-44-3D**, Caprolactone, polymers **502-97-6D**, Glycolide, polymers **2453-03-4D**, Trimethylene carbonate, polymers 3041-16-5D, p-Dioxanone, polymers 4511-42-6D, L-Lactide, polymers 25322-68-3, Polyethylene glycol 26780-50-7, Resomer RG 504 (scaffolds for tissue engineered hair)

L23 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

1992:578365 Document No. 117:178365 Process for preparing particles of bioabsorbable polymer. Chesterfield, Michael P.; Muth, Ross R.; Kennedy, John (United States Surgical Corp., USA). Eur. Pat. Appl.

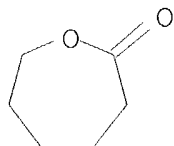
EP 499205 A2 19920819, 8 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1992-102262 19920211. PRIORITY: US 1991-654219 19910212.

AB Bioabsorbable polymer particles are prepd. by rotary atomization. The polymer particles can be used in the repair of bone or tissue. A glycolide-l-lactide copolymer was heated, applied from an extruder of a screw type to a rotary atomizer having a spinning disk, with the disk being heated, and the polymer was applied as a thin film on the spinning disk. The polymer film was broken into particles and collected and cooled.

IT **502-44-3DP**, ϵ -Caprolactone, polymers
502-97-6DP, Glycolide, polymers **2453-03-4DP**,
Trimethylene carbonate, polymers
(bioabsorbable, prepn. of, rotary atomization in)

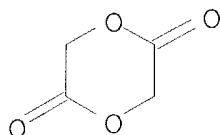
RN 502-44-3 HCAPLUS

CN 2-Oxepanone (8CI, 9CI) (CA INDEX NAME)



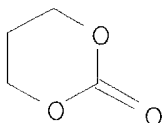
RN 502-97-6 HCAPLUS

CN 1,4-Dioxane-2,5-dione (9CI) (CA INDEX NAME)



RN 2453-03-4 HCAPLUS

CN 1,3-Dioxan-2-one (9CI) (CA INDEX NAME)



IC ICM C08J003-12

ICS B01J002-04

ICI C08L067-04

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 37

IT 50-21-5DP, Lactic acid, polymers 95-96-5DP, Lactide, polymers

502-44-3DP, ϵ -Caprolactone, polymers

502-97-6DP, Glycolide, polymers 2453-03-4DP,

Trimethylene carbonate, polymers 3041-16-5DP, Dioxanone, polymers

26009-03-0P, Poly(glycolic acid) SRU 26124-68-5P, Poly(glycolic acid) 30846-39-0P

(bioabsorbable, prepn. of, rotary atomization in)